

**LEGEND**

- Approximate Site Boundary
- RESIDUAL
- Soil Landscapes**
- ALLUVIAL
- EROSIONAL
- WATER

**NOTES**

1. The Approximate Site Boundary represents the spatial extent of the Golder Geotechnical and Geochemical project.

**REFERENCE**

1. Aerial Image sourced from Nearmap.
2. Soil Landscapes Sourced from NSW Department of Environment, Climate Change and Water (DECCW): Bannerman SM and Hazelton PA 1990, Soil Landscapes of the Penrith 1:100 000 Sheet Map. Soil Conservation Service, Sydney.



REFERENCE SCALE: 1:15,000 (at A4)  
PROJECTION: GDA 1994 MGA Zone 56

CLIENT  
**THE TACTICAL GROUP**

PROJECT  
**MPW GEOTECHNICAL SITE INVESTIGATION**

TITLE  
**GEOTECHNICAL INTERPRETIVE REPORT: SOIL LANDSCAPES MAP**

CONSULTANT	YYYY-MM-DD	2016-09-02
	PREPARED	KJS
	DESIGN	-
	REVIEW	NRS
	APPROVED	NRS



PROJECT 1416224      DOCUMENT 016      Rev. 2      FIGURE A019

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM A4

Path: J:\geo\2014\1416224\_SIMTA\_Stage\_1\_Morebank\Technical Docs\GIS\Project\016\_Rev\11416224\_016\_Rev\_1\_F019.mxd



**LEGEND**

- Approximate Site Boundary
- Inferred Groundwater Contours (mAHD)

**NOTES**

1. The Approximate Site Boundary represents the spatial extent of the Golder Geotechnical and Geochemical project.
2. Groundwater Contours sourced from Figure 9 in 'Site Audit Report, Moorebank Intermodal Terminal, Morebank, NSW', prepared for the Department of Finance and Deregulation by Aecom, 3 May 2012

**REFERENCE**

1. Aerial Image sourced from Nearmap.



REFERENCE SCALE: 1:15,000 (at A4)  
 PROJECTION: GDA 1994 MGA Zone 56

CLIENT  
 THE TACTICAL GROUP

PROJECT  
 MPW GEOTECHNICAL SITE INVESTIGATION

TITLE  
**GEOTECHNICAL INTERPRETIVE REPORT: GROUNDWATER CONTOURS - 2011**

CONSULTANT	YYYY-MM-DD	2016-09-02
	PREPARED	KJS
	DESIGN	-
	REVIEW	NRS
	APPROVED	NRS



PROJECT 1416224      DOCUMENT 016      Rev. 2      FIGURE A020

Path: J:\geo\20141416224\_SIMTA\_Stage\_1\_Moorebank\Technical Docs\GIS\Project\016-Rev\11416224\_016\_Rev\_1\_F020.mxd

26mm IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM A4



**LEGEND**

- Approximate Site Boundary
- Inferred Groundwater Contours (December 2014 mAHD)

**NOTES**

1. The Approximate Site Boundary represents the spatial extent of the Golder Geotechnical and Geochemical project.

**REFERENCE**

1. Aerial Image sourced from Nearmap.



REFERENCE SCALE: 1:15,000 (at A4)  
PROJECTION: GDA 1994 MGA Zone 56

CLIENT  
**THE TACTICAL GROUP**

PROJECT  
**MPW GEOTECHNICAL SITE INVESTIGATION**

TITLE  
**GEOTECHNICAL INTERPRETIVE REPORT: GROUNDWATER CONTOURS - 2014**

CONSULTANT



YYYY-MM-DD 2016-09-02

PREPARED KJS

DESIGN -

REVIEW NRS

APPROVED NRS

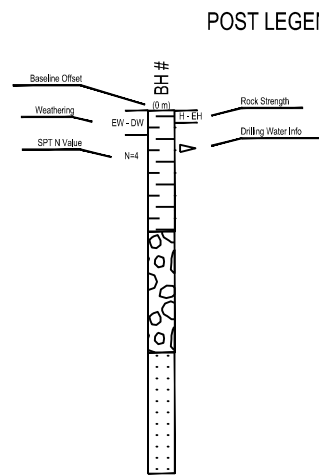
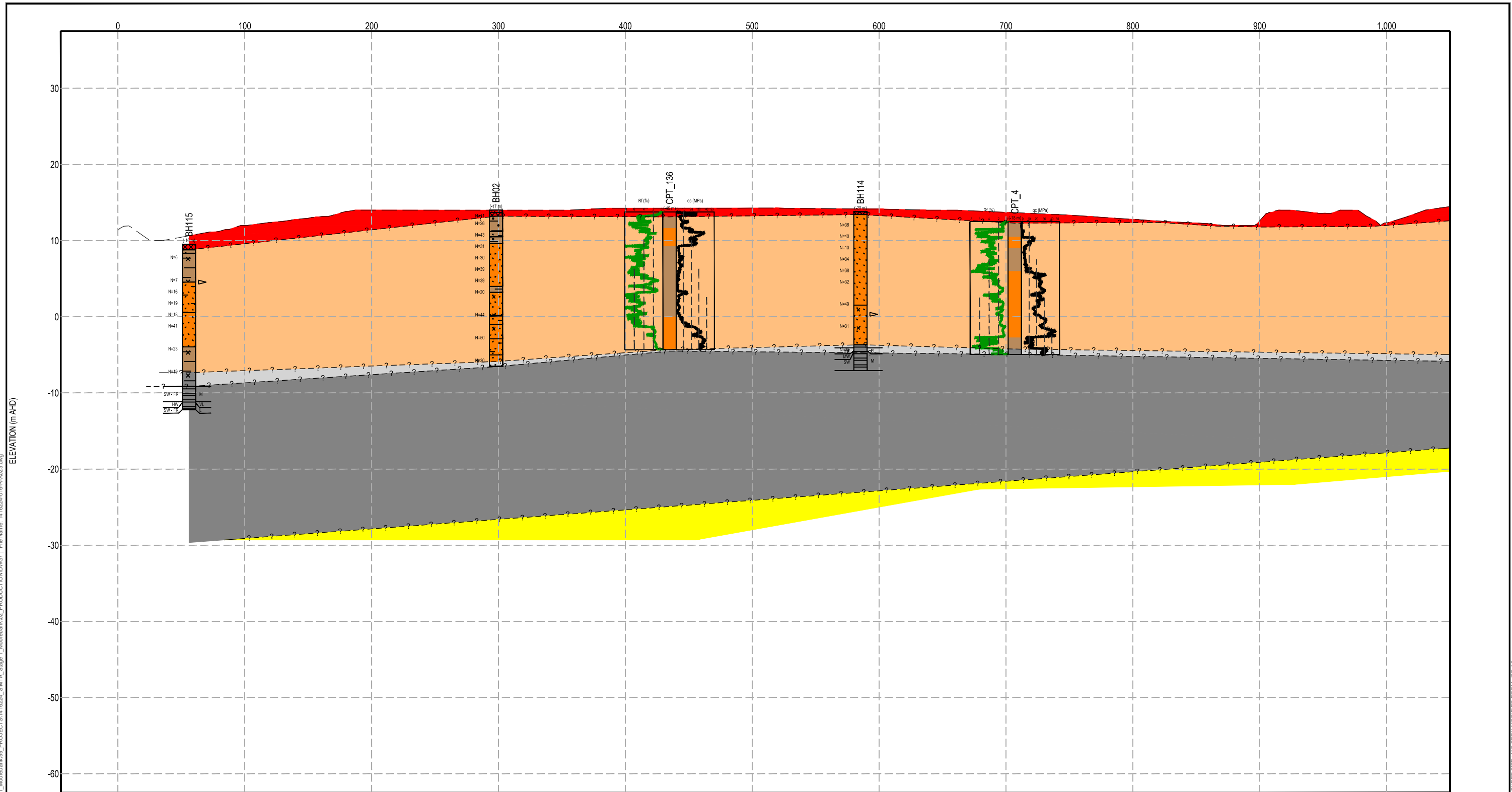
PROJECT  
1416224

DOCUMENT  
016

Rev.  
2

FIGURE  
**A021**

Path: \\golder\_au\proj\Sydney\Geomatics\SYDNEY INTERMODAL TERMINAL ALLIANCE (SMTA)\SMTA\_Stage 1\_Mocobank\99\_PROJECTS\1416224\_SMTA\_Stage 1\_Mocobank\02\_PRODUCTION\DWG\1 File Name: 1416224-016-R-A023.dwg



**MATERIAL GRAPHIC**

- TOPSOIL
- Clayey SAND
- Silty SAND
- FILL
- SAND
- SHALE
- Sandy CLAY
- CLAY
- Silty CLAY

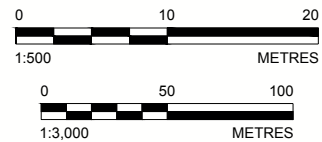
- ASPHALTIC CONCRETE
- Gravelly SAND

- UNIT 1 - SURFICIAL SOILS
- UNIT 2 - RECENT ALLUVIUM

- UNIT 3 - OLDER ALLUVIUM
- UNIT 3A - DENSE - VERY DENSE SAND
- UNIT 3B - VERY STIFF - HARD CLAYS

- UNIT 4A - RESIDUAL SHALE SOIL
- UNIT 4B - EXTREMELY LOW TO LOW STRENGTH SHALE
- UNIT 4C - SHALE OF MEDIUM STRENGTH OR HIGHER

UNIT 5 - MITTAGONG / HAWKESBURY SANDSTONE + ASSOCIATED RESIDUAL SOILS



CLIENT  
SYDNEY INTERMODAL TERMINAL ALLIANCE

CONSULTANT



YYYY-MM-DD	2016-09-02
PREPARED	EJJ
DESIGN	JDM
REVIEW	NRS
APPROVED	BJF

PROJECT  
MPW  
GEOTECHNICAL SITE INVESTIGATION

TITLE  
**INFERRED SUBSURFACE SECTION A - A' SHEET 1 OF 3**

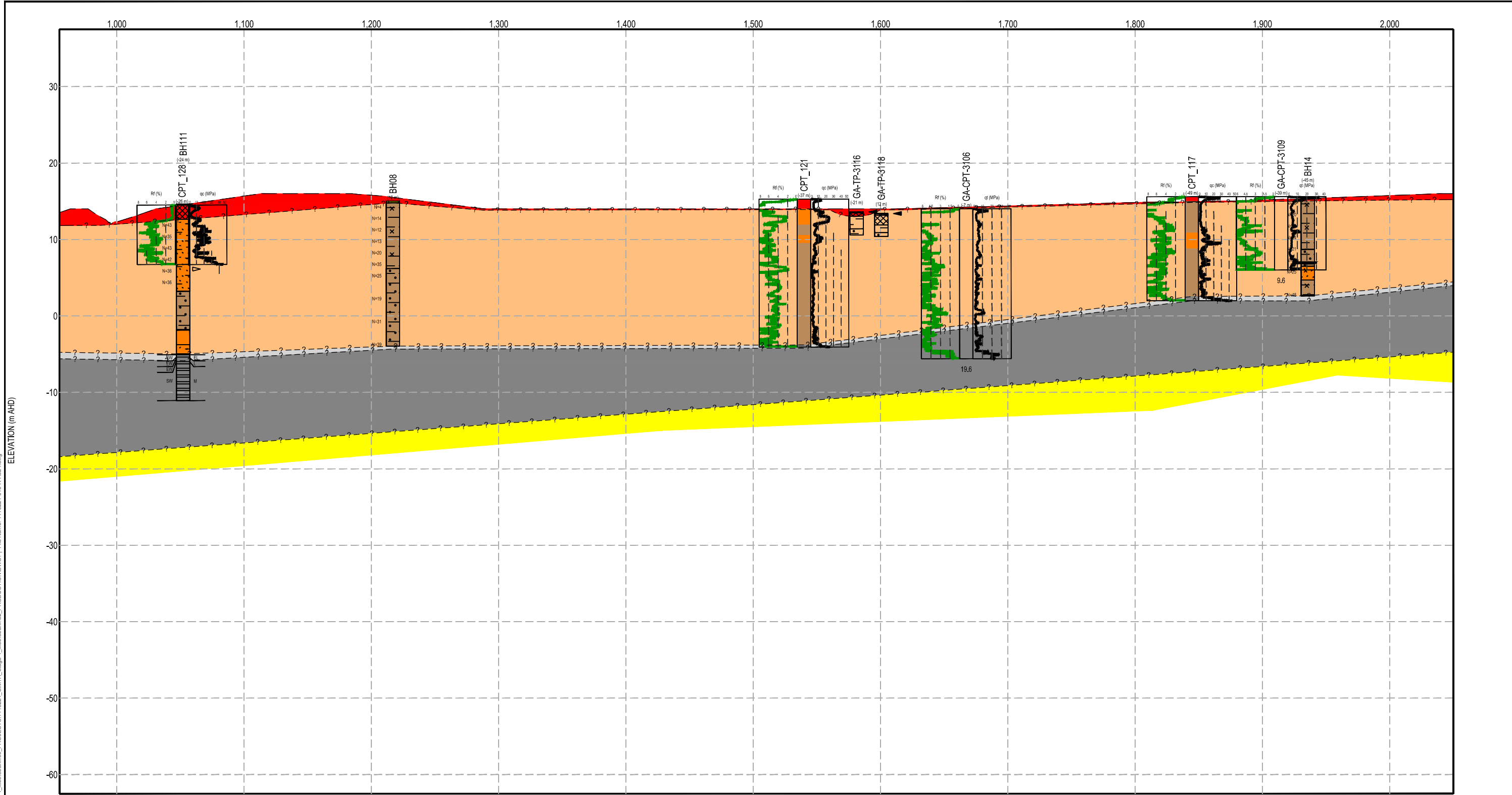
PROJECT No.  
1416224

REPORT  
016 - R

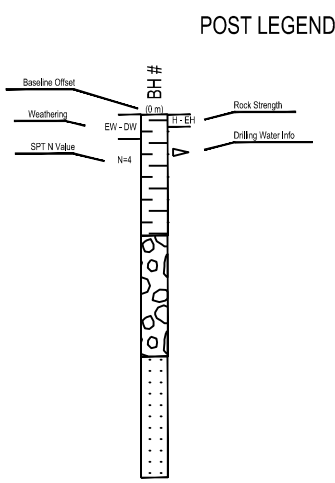
Rev.  
2

FIGURE  
A023

25 mm IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ISO A3

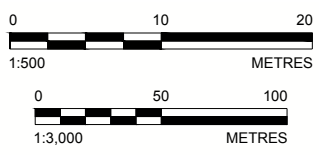


Path: \\golder\gdp\sydney\geomatics\sydney\intermodal\terminal\alliance\sm\TA\SM\TA\_Stage\_1\_Mocobank\02\_PRODUCTION\DWG\1\_Files\Name - 1416224-016-R-A024.dwg



**MATERIAL GRAPHIC**


	UNIT 1 - SURFICIAL SOILS		UNIT 3 - OLDER ALLUVIUM		UNIT 4A - RESIDUAL SHALE SOIL
	UNIT 2 - RECENT ALLUVIUM		UNIT 3A - DENSE - VERY DENSE SAND		UNIT 4B - EXTREMELY LOW TO LOW STRENGTH SHALE
			UNIT 3B - VERY STIFF - HARD CLAYS		UNIT 4C - SHALE OF MEDIUM STRENGTH OR HIGHER
					UNIT 5 - MITTAGONG / HAWKESBURY SANDSTONE + ASSOCIATED RESIDUAL SOILS

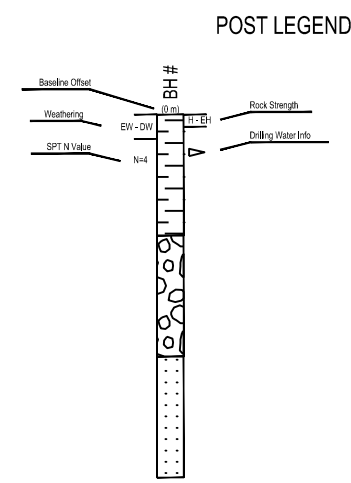
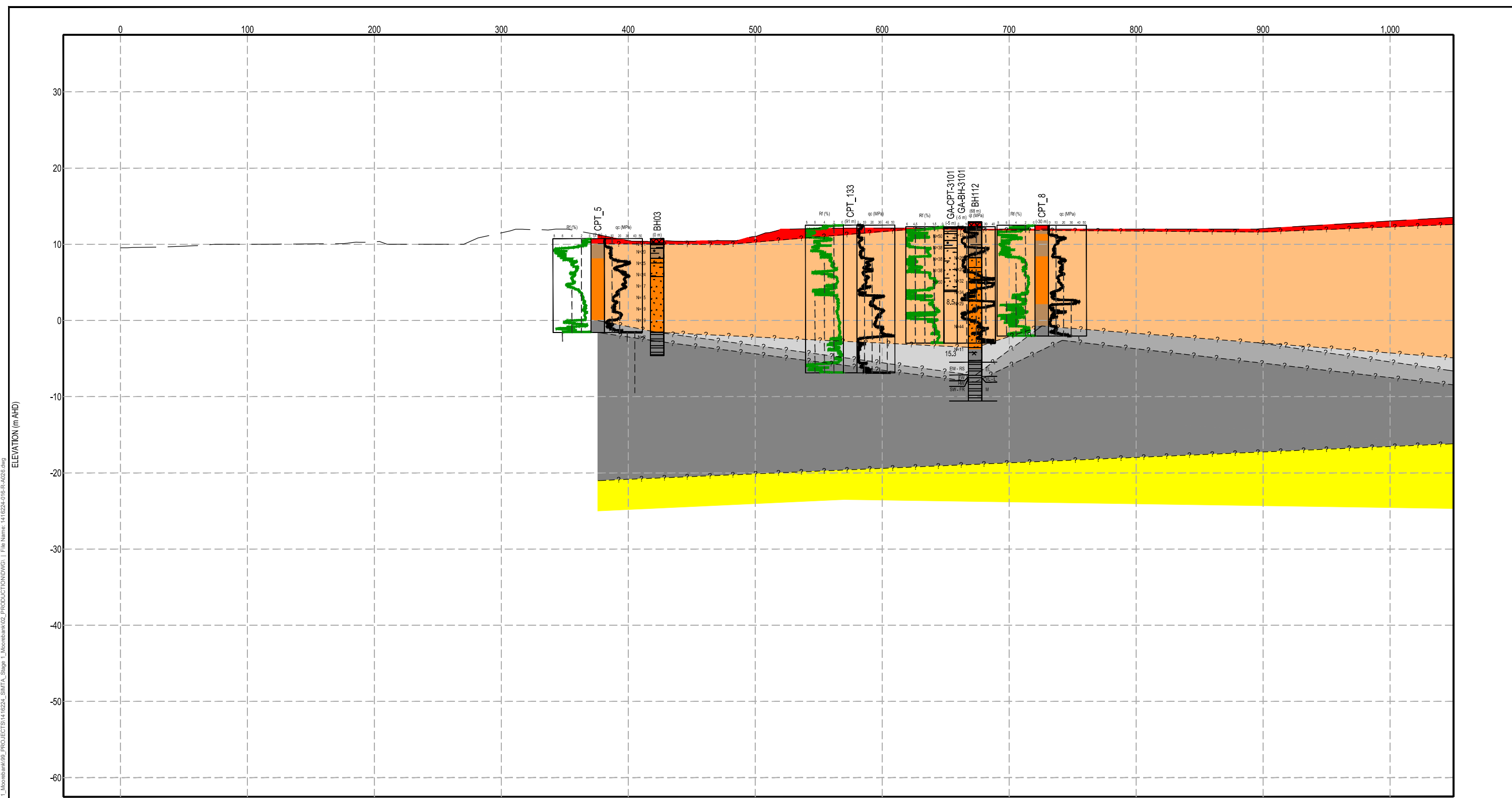


<b>CLIENT</b> SYDNEY INTERMODAL TERMINAL ALLIANCE		<b>PROJECT</b> MPW GEOTECHNICAL SITE INVESTIGATION	
<b>CONSULTANT</b> 		YYYY-MM-DD 2016-09-02	<b>TITLE</b> INFERRED SUBSURFACE SECTION A - A' SHEET 2 OF 3
PREPARED EJJ	DESIGN JDM	REVIEW NRS	PROJECT No. 1416224
APPROVED BJF	REPORT 016 - R	Rev. 2	FIGURE A024

25 mm IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ISO A3



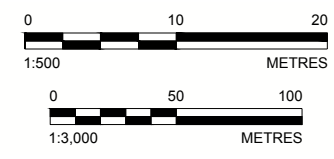
Path: \\golder\gdp\sydney\geomatics\sydney\intermodal\terminal\alliance\sm\ta\sm\ta\_stage\_1\_moc\bank02\_production\dwg\1\_16224-016-R-A026.dwg



**MATERIAL GRAPHIC**

TOPSOIL	CLAY	SAND
FILL	Silty SAND	SHALE
Sandy CLAY	Clayey SAND	Silty CLAY

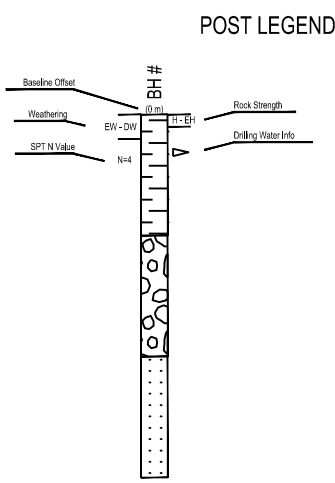
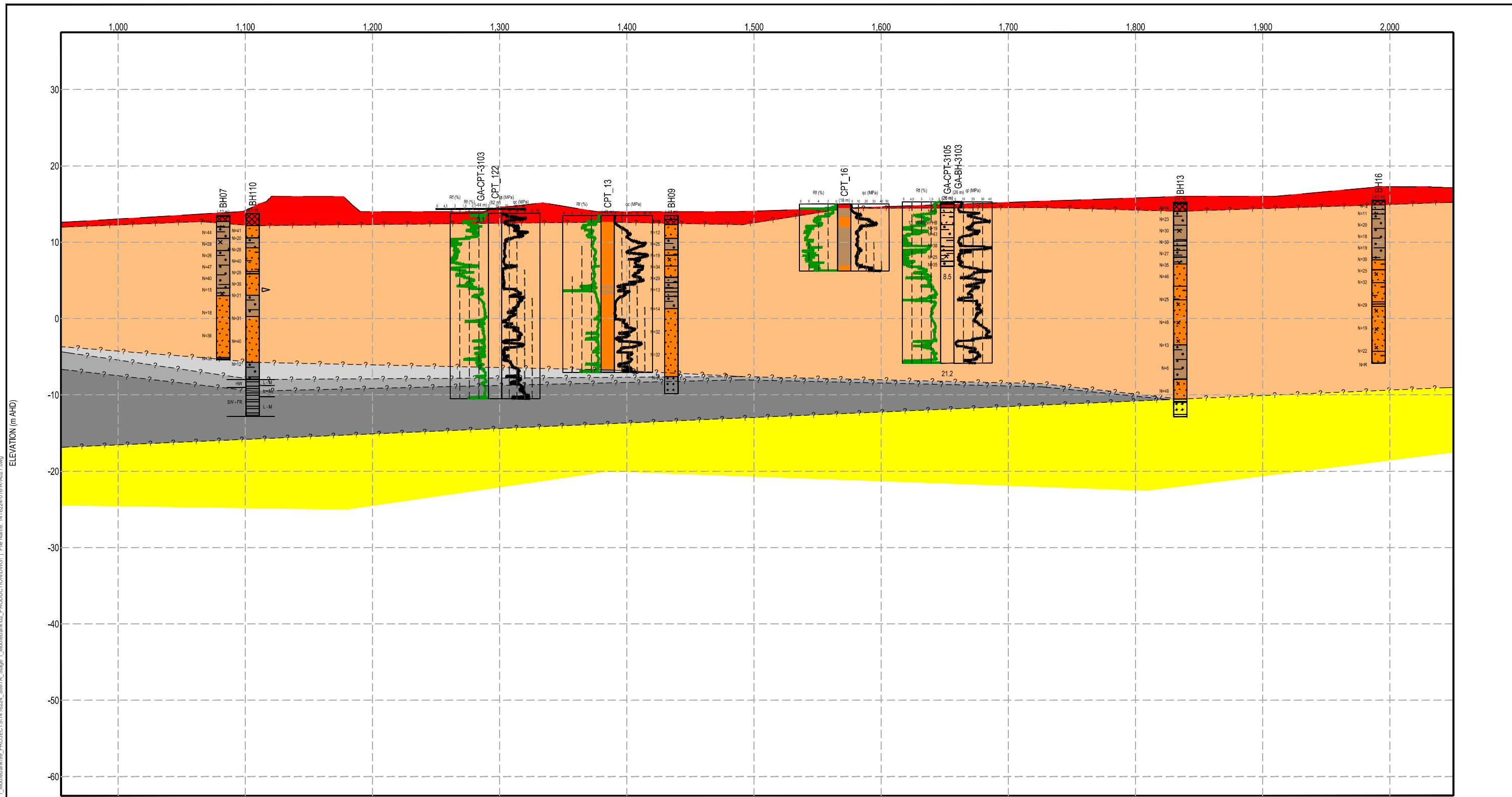
CORE LOSS	UNIT 1 - SURFICIAL SOILS	UNIT 3 - OLDER ALLUVIUM	UNIT 4A - RESIDUAL SHALE SOIL
	UNIT 2 - RECENT ALLUVIUM	UNIT 3A - DENSE -VERY DENSE SAND	UNIT 4B - EXTREMELY LOW TO LOW STRENGTH SHALE
		UNIT 3B - VERY STIFF - HARD CLAYS	UNIT 4C - SHALE OF MEDIUM STRENGTH OR HIGHER
			UNIT 5 - MITTAGONG / HAWKESBURY SANDSTONE + ASSOCIATED RESIDUAL SOILS



CLIENT SYDNEY INTERMODAL TERMINAL ALLIANCE	PROJECT MPW GEOTECHNICAL SITE INVESTIGATION																
CONSULTANT 	TITLE INFERRED SUBSURFACE SECTION B - B' SHEET 1 OF 3																
<table border="0"> <tr><td>YYYY-MM-DD</td><td>2016-09-02</td></tr> <tr><td>PREPARED</td><td>EJJ</td></tr> <tr><td>DESIGN</td><td>JDM</td></tr> <tr><td>REVIEW</td><td>NRS</td></tr> <tr><td>APPROVED</td><td>BJF</td></tr> </table>	YYYY-MM-DD	2016-09-02	PREPARED	EJJ	DESIGN	JDM	REVIEW	NRS	APPROVED	BJF	<table border="0"> <tr><td>PROJECT No.</td><td>1416224</td></tr> <tr><td>REPORT</td><td>016 - R</td></tr> <tr><td>Rev.</td><td>2</td></tr> </table>	PROJECT No.	1416224	REPORT	016 - R	Rev.	2
YYYY-MM-DD	2016-09-02																
PREPARED	EJJ																
DESIGN	JDM																
REVIEW	NRS																
APPROVED	BJF																
PROJECT No.	1416224																
REPORT	016 - R																
Rev.	2																
	FIGURE A026																

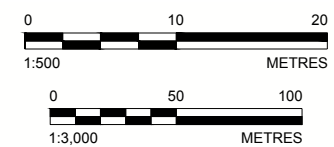
25 mm IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ISO A3

Path: \\golder\gdp\sydney\Geomatics\SYDNEY INTERMODAL TERMINAL ALLIANCE (SMTA)\SMTA\_Stage\_1\_Mocobank\02\_PRODUCTION\DWG\1\_16224-016-R-A027.dwg



MATERIAL GRAPHIC	
	TOPSOIL
	FILL
	Silty CLAY
	Sandy CLAY
	Sandy SILT
	SAND
	Clayey SAND
	Silty SAND
	SANDSTONE
	SHALE
	CORE LOSS
	LOW PLASTICITY CLAY

	UNIT 1 - SURFICIAL SOILS		UNIT 3 - OLDER ALLUVIUM		UNIT 4A - RESIDUAL SHALE SOIL
	UNIT 2 - RECENT ALLUVIUM		UNIT 3A - DENSE - VERY DENSE SAND		UNIT 4B - EXTREMELY LOW TO LOW STRENGTH SHALE
			UNIT 3B - VERY STIFF - HARD CLAYS		UNIT 4C - SHALE OF MEDIUM STRENGTH OR HIGHER
					UNIT 5 - MITTAGONG / HAWKESBURY SANDSTONE + ASSOCIATED RESIDUAL SOILS

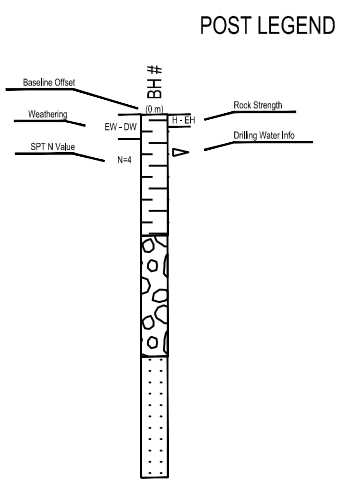
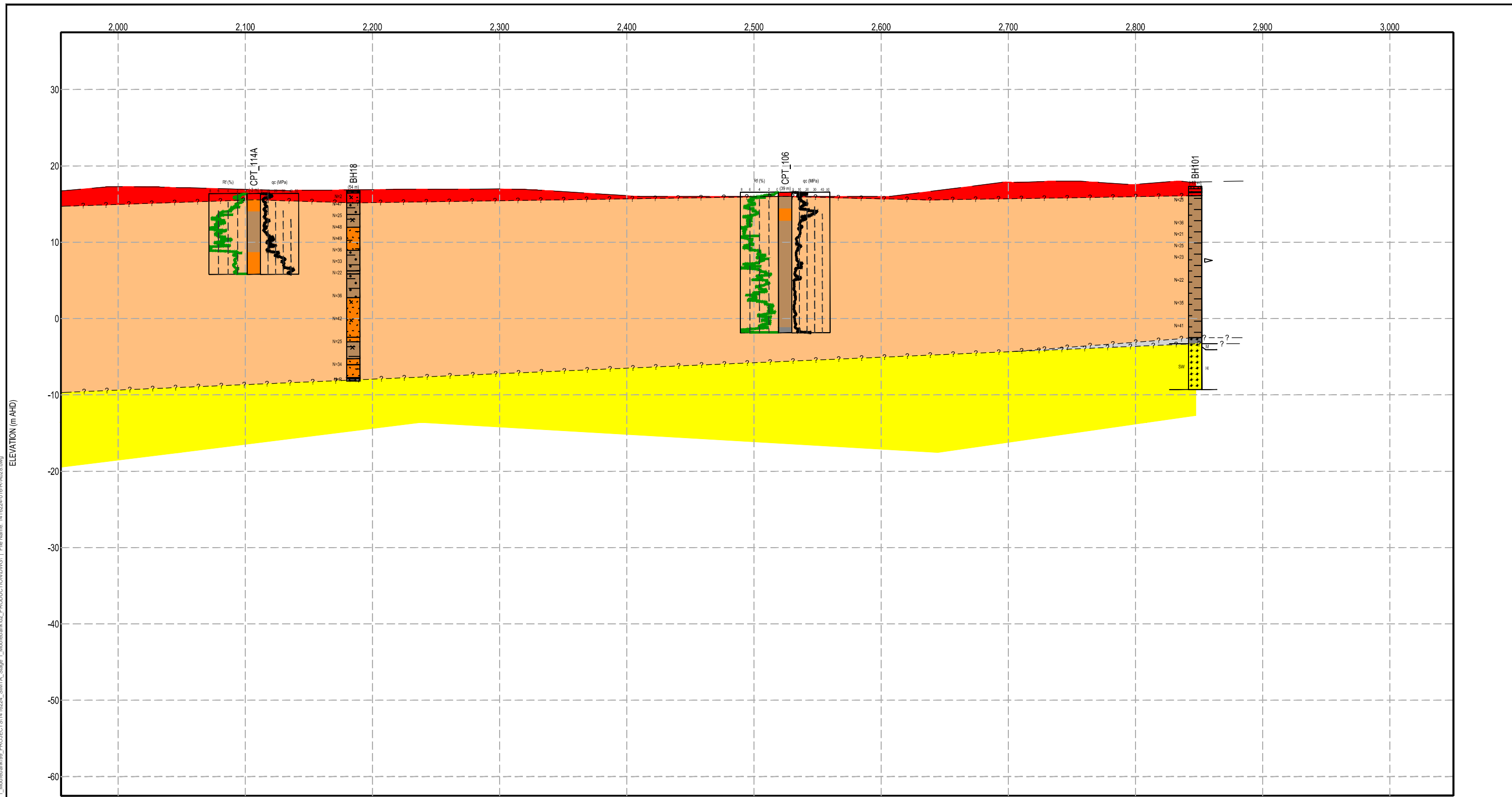


CLIENT SYDNEY INTERMODAL TERMINAL ALLIANCE	PROJECT MPW GEOTECHNICAL SITE INVESTIGATION
CONSULTANT 	TITLE INFERRED SUBSURFACE SECTION B - B' SHEET 2 OF 3
PREPARED EJJ	PROJECT No. 1416224
DESIGN JDM	REPORT 016 - R
REVIEW NRS	Rev. 2
APPROVED BJF	FIGURE A027

25 mm IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ISO A3



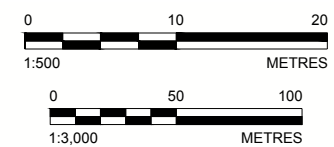
Path: \\golder\gdp\sydney\Geomatics\SYDNEY INTERMODAL TERMINAL ALLIANCE (SMTA)\SMTA\_Stage\_1\_Mocobank\02\_PRODUCTION\DWG\1\_Files\1416224-016-R-A028.dwg



**MATERIAL GRAPHIC**

TOPSOIL	Sandy CLAY	SAND	GRAVEL
FILL	Silty CLAY	SANDSTONE	CLAY
Silty SAND	Clayey SAND	CORE LOSS	

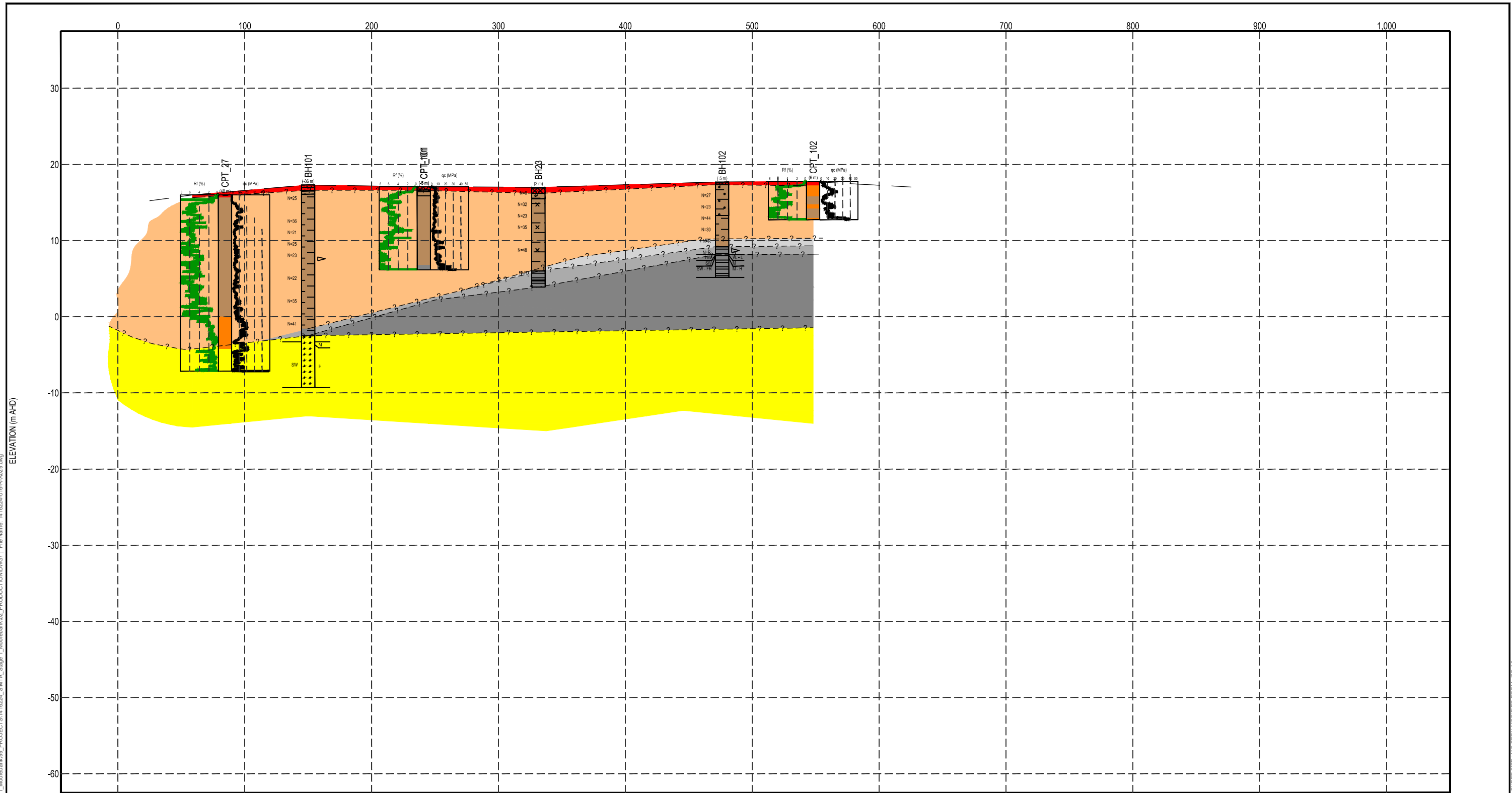
UNIT 1 - SURFICIAL SOILS	UNIT 3 - OLDER ALLUVIUM	UNIT 4A - RESIDUAL SHALE SOIL
UNIT 2 - RECENT ALLUVIUM	UNIT 3A - DENSE - VERY DENSE SAND	UNIT 4B - EXTREMELY LOW TO LOW STRENGTH SHALE
	UNIT 3B - VERY STIFF - HARD CLAYS	UNIT 4C - SHALE OF MEDIUM STRENGTH OR HIGHER
		UNIT 5 - MITTAGONG / HAWKESBURY SANDSTONE + ASSOCIATED RESIDUAL SOILS



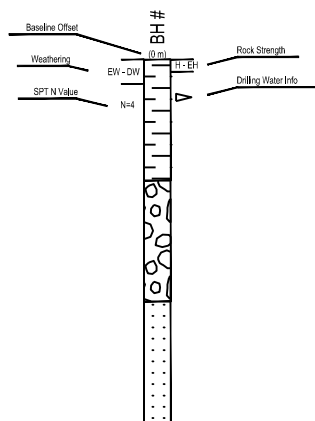
CLIENT <b>SYDNEY INTERMODAL TERMINAL ALLIANCE</b>	PROJECT <b>MPW GEOTECHNICAL SITE INVESTIGATION</b>																
CONSULTANT 	TITLE <b>INFERRED SUBSURFACE SECTION B - B' SHEET 3 OF 3</b>																
<table border="0"> <tr><td>YYYY-MM-DD</td><td>2016-09-02</td></tr> <tr><td>PREPARED</td><td>EJJ</td></tr> <tr><td>DESIGN</td><td>JDM</td></tr> <tr><td>REVIEW</td><td>NRS</td></tr> <tr><td>APPROVED</td><td>BJF</td></tr> </table>	YYYY-MM-DD	2016-09-02	PREPARED	EJJ	DESIGN	JDM	REVIEW	NRS	APPROVED	BJF	<table border="0"> <tr><td>PROJECT No.</td><td>1416224</td></tr> <tr><td>REPORT</td><td>016 - R</td></tr> <tr><td>Rev.</td><td>2</td></tr> </table>	PROJECT No.	1416224	REPORT	016 - R	Rev.	2
YYYY-MM-DD	2016-09-02																
PREPARED	EJJ																
DESIGN	JDM																
REVIEW	NRS																
APPROVED	BJF																
PROJECT No.	1416224																
REPORT	016 - R																
Rev.	2																
	FIGURE <b>A028</b>																

25 mm IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ISO A3

Path: \\golder\pds\sydney\Geomatics\SYDNEY INTERMODAL TERMINAL ALLIANCE (SMTA)\SMTA\_Stage\_1\_Mocobank\02\_PRODUCTION\DWG\1\_16224-SMTA\_Stage\_1\_Mocobank\02\_PRODUCTION\DWG\1\_16224-016-R-A029.dwg



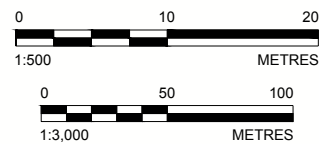
POST LEGEND



MATERIAL GRAPHIC

- |            |            |        |             |
|------------|------------|--------|-------------|
| TOPSOIL    | Silty CLAY | SAND   | SANDSTONE   |
| FILL       | SHALE      | GRAVEL | Clayey SAND |
| Sandy CLAY | CORE LOSS  | CLAY   |             |

- |                          |                                   |   |
|--------------------------|-----------------------------------|---|
| UNIT 1 - SURFICIAL SOILS | UNIT 3 - OLDER ALLUVIUM           | UNIT 4A - RESIDUAL SHALE SOIL   |
| UNIT 2 - RECENT ALLUVIUM | UNIT 3A - DENSE -VERY DENSE SAND  | UNIT 4B - EXTREMELY LOW TO LOW STRENGTH SHALE                         |
|                          | UNIT 3B - VERY STIFF - HARD CLAYS | UNIT 4C - SHALE OF MEDIUM STRENGTH OR HIGHER                          |
|                          |                                   | UNIT 5 - MITTAGONG / HAWKESBURY SANDSTONE + ASSOCIATED RESIDUAL SOILS |



CLIENT  
SYDNEY INTERMODAL TERMINAL ALLIANCE

PROJECT  
MPW  
GEOTECHNICAL SITE INVESTIGATION

CONSULTANT



YYYY-MM-DD	2016-09-02
PREPARED	EJJ
DESIGN	JDM
REVIEW	NRS
APPROVED	BJF

TITLE  
**INFERRED SUBSURFACE SECTION C - C'**

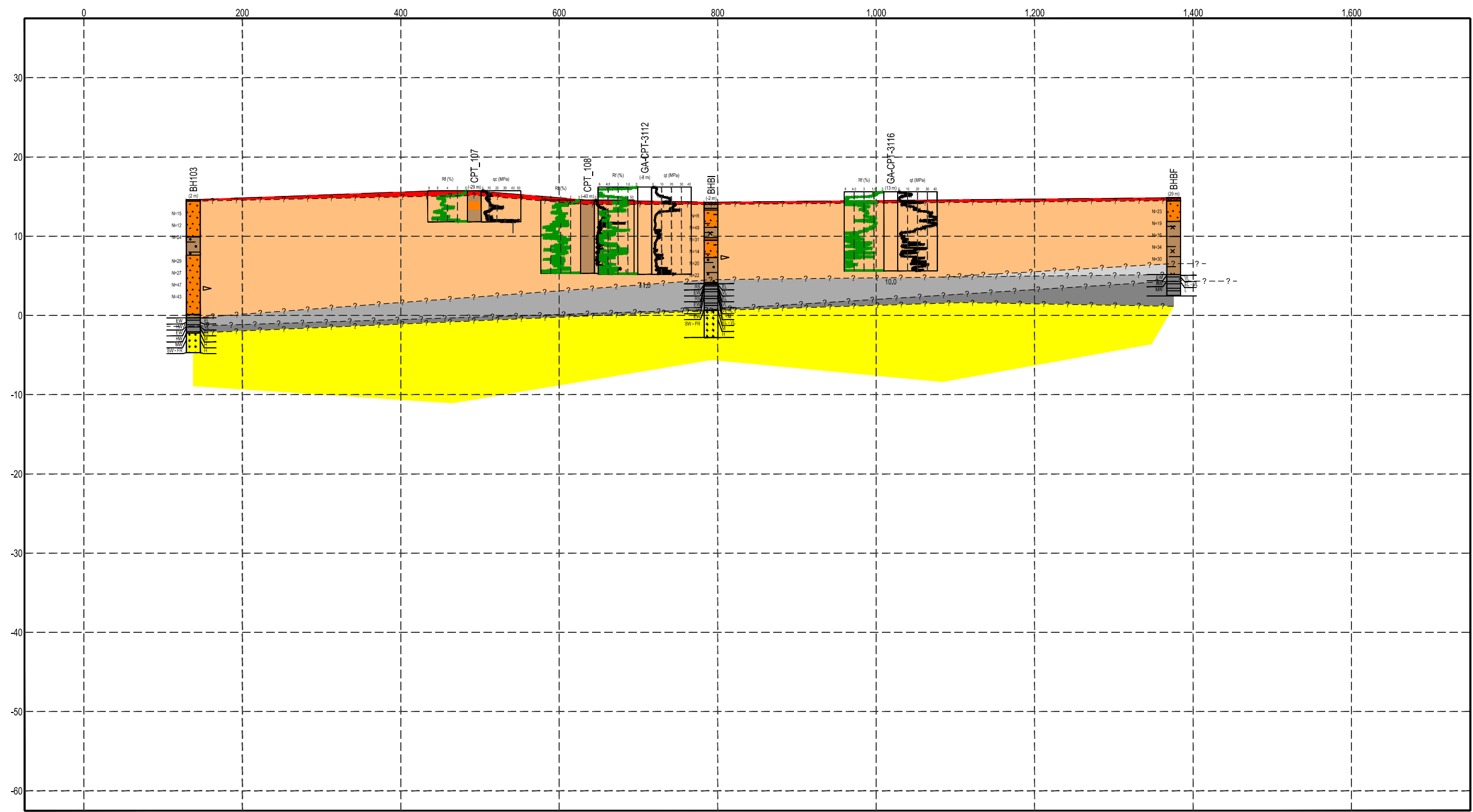
PROJECT No. 1416224  
REPORT 016 - R

Rev. 2

FIGURE  
A029

25 mm IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ISO A3

Path: \\golder\_au\gpa\sydney\intermodal\_alliance\csm\TA\SIMTA\_Stage\_1\_Moocahauk\02\_PRODUCTION\DWG\1\_16224\_016-R-A030.dwg



POST LEGEND			MATERIAL GRAPHIC			UNIT 1 - SURFICIAL SOILS			UNIT 2 - RECENT ALLUVIUM			UNIT 3 - OLDER ALLUVIUM			UNIT 3A - DENSE - VERY DENSE SAND			UNIT 3B - VERY STIFF - HARD CLAYS			UNIT 4A - RESIDUAL SHALE SOIL			UNIT 4B - EXTREMELY LOW TO LOW STRENGTH SHALE			UNIT 4C - SHALE OF MEDIUM STRENGTH OR HIGHER			UNIT 5 - MITTAGONG / HAWKESBURY SANDSTONE + ASSOCIATED RESIDUAL SOILS		

CLIENT: SYDNEY INTERMODAL TERMINAL ALLIANCE

PROJECT: MPW GEOTECHNICAL SITE INVESTIGATION

CONSULTANT:

PREPARED: EJJ  
DESIGN: JDM  
REVIEW: NRS  
APPROVED: BJF

DATE: 2016-09-02

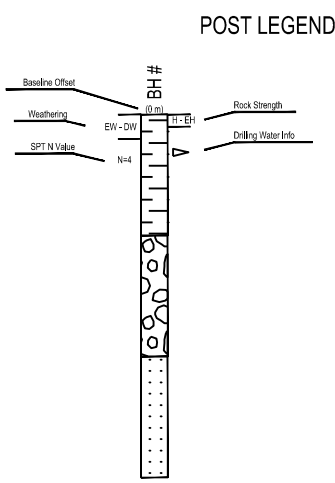
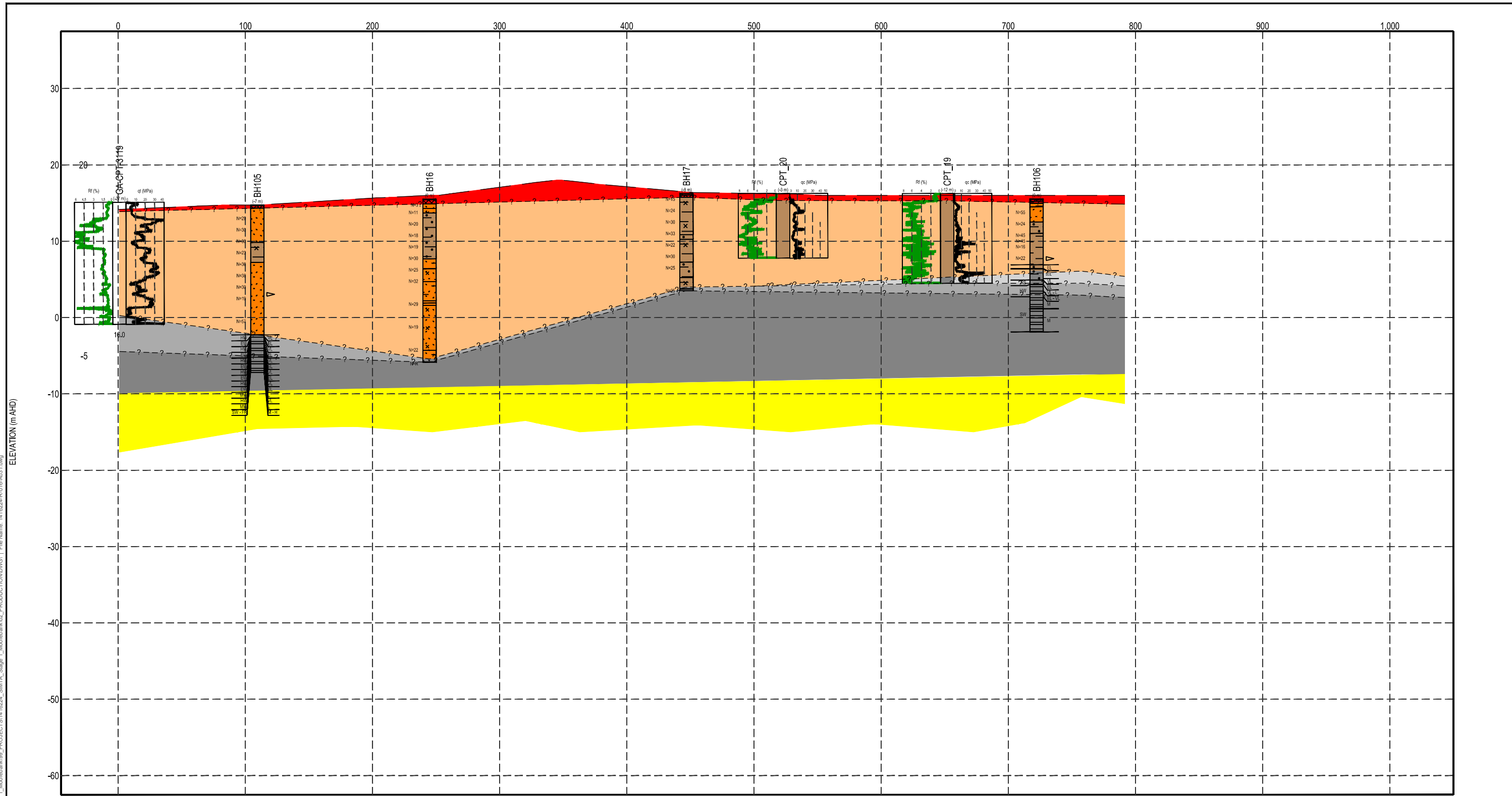
TITLE: INFERRED SUBSURFACE SECTION D - D'

PROJECT No: 1416224  
REPORT: 016 - R  
Rev: 2

FIGURE: A030

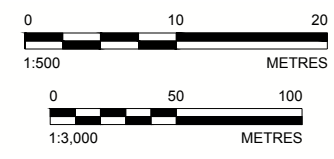
25 mm IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ISO A3

Path: \\golder\gdp\sydney\geomatics\sydney\intermodal\terminal\alliance\sm\ta\sm\ta\_stage\_1\_moc\bank\02\_production\dwg\1 | File Name: 1416224-R-016-A031.dwg



MATERIAL GRAPHIC	
	TOPSOIL
	FILL
	SAND
	Silty SAND
	Sandy CLAY
	Clayey SAND
	SHALE
	Silty CLAY
	CLAY
	CORE LOSS

	UNIT 1 - SURFICIAL SOILS		UNIT 3 - OLDER ALLUVIUM		UNIT 4A - RESIDUAL SHALE SOIL
	UNIT 2 - RECENT ALLUVIUM		UNIT 3A - DENSE -VERY DENSE SAND		UNIT 4B - EXTREMELY LOW TO LOW STRENGTH SHALE
			UNIT 3B - VERY STIFF - HARD CLAYS		UNIT 4C - SHALE OF MEDIUM STRENGTH OR HIGHER
					UNIT 5 - MITTAGONG / HAWKESBURY SANDSTONE + ASSOCIATED RESIDUAL SOILS

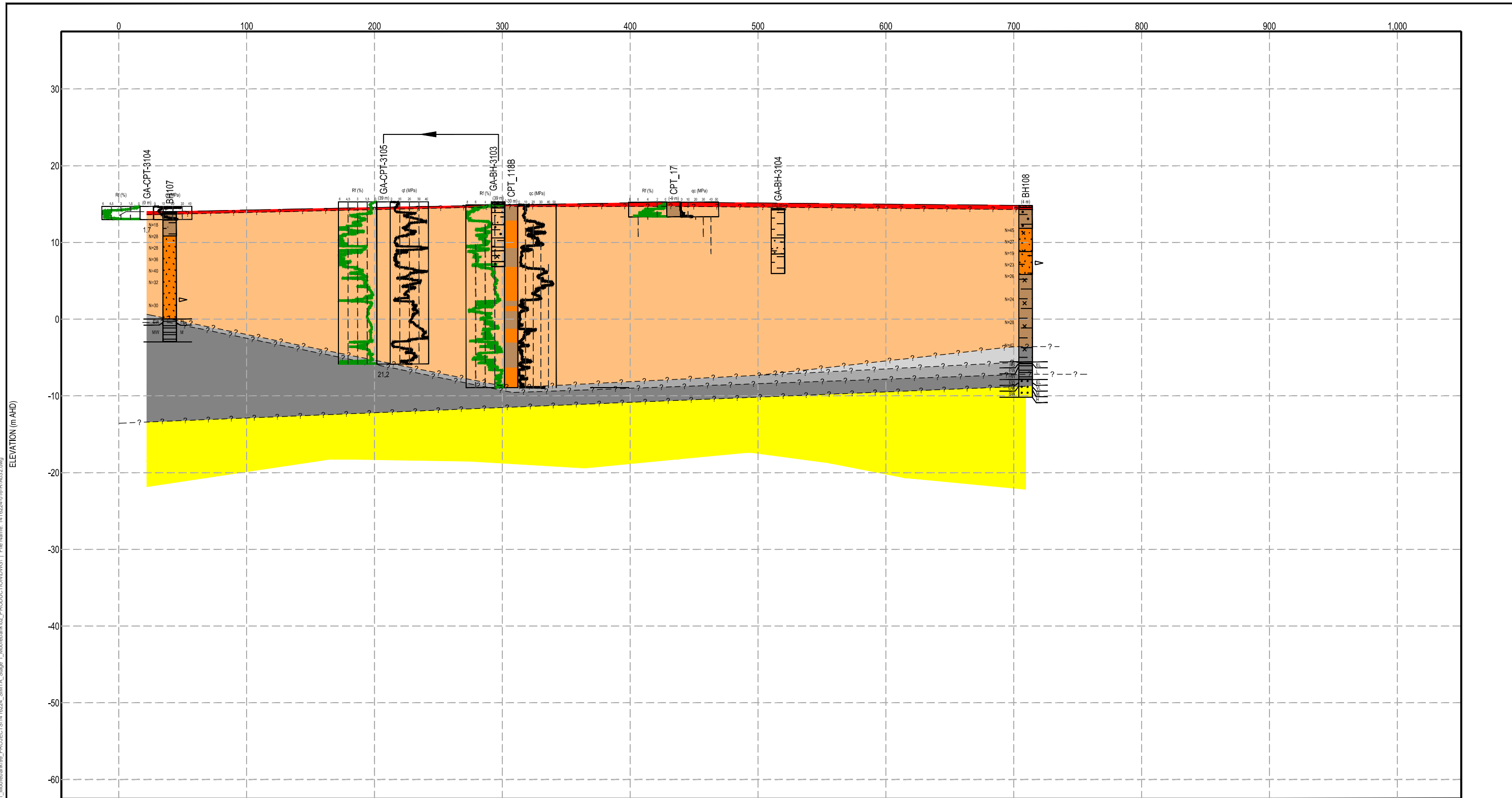


CLIENT	SYDNEY INTERMODAL TERMINAL ALLIANCE	
CONSULTANT	Golder Associates	
PREPARED	EJJ	2016-09-02
DESIGN	JDM	
REVIEW	NRS	
APPROVED	BJF	

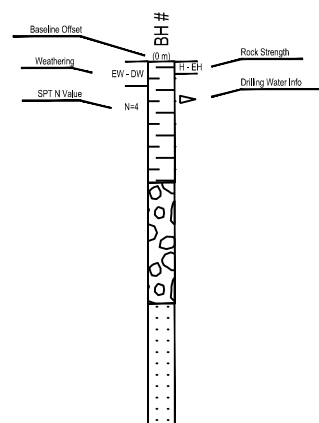
PROJECT	MPW GEOTECHNICAL SITE INVESTIGATION	
TITLE	INFERRED SUBSURFACE SECTION E - E'	
PROJECT No.	REPORT	Rev.
1416224	016 - R	2
FIGURE	A031	

25 mm IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ISO A3

Path: \\golder\gdp\sydney\Geomatics\SYDNEY INTERMODAL TERMINAL ALLIANCE (SMTA)\SMTA\_Stage\_1\_Mocobank\02\_PRODUCTION\DWG\1\_Files\Name - 1416224-016-R-A032.dwg



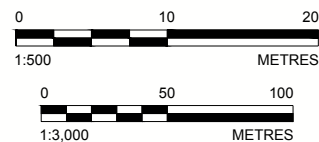
POST LEGEND



MATERIAL GRAPHIC

- SAND
- CLAY
- Silty CLAY
- Silty SAND
- SANDSTONE
- Clayey SAND
- SHALE
- Silty SAND
- SANDSTONE
- Sandy CLAY
- FILL
- SANDSTONE

- UNIT 1 - SURFICIAL SOILS
- UNIT 2 - RECENT ALLUVIUM
- UNIT 3 - OLDER ALLUVIUM
- UNIT 3A - DENSE - VERY DENSE SAND
- UNIT 3B - VERY STIFF - HARD CLAYS
- UNIT 4A - RESIDUAL SHALE SOIL
- UNIT 4B - EXTREMELY LOW TO LOW STRENGTH SHALE
- UNIT 4C - SHALE OF MEDIUM STRENGTH OR HIGHER
- UNIT 5 - MITTAGONG / HAWKESBURY SANDSTONE + ASSOCIATED RESIDUAL SOILS



CLIENT  
SYDNEY INTERMODAL TERMINAL ALLIANCE

PROJECT  
MPW  
GEOTECHNICAL SITE INVESTIGATION

CONSULTANT



YYYY-MM-DD 2016-09-02  
PREPARED EJJ  
DESIGN JDM  
REVIEW NRS  
APPROVED BJF

TITLE  
INFERRED SUBSURFACE SECTION F - F'

PROJECT No.  
1416224

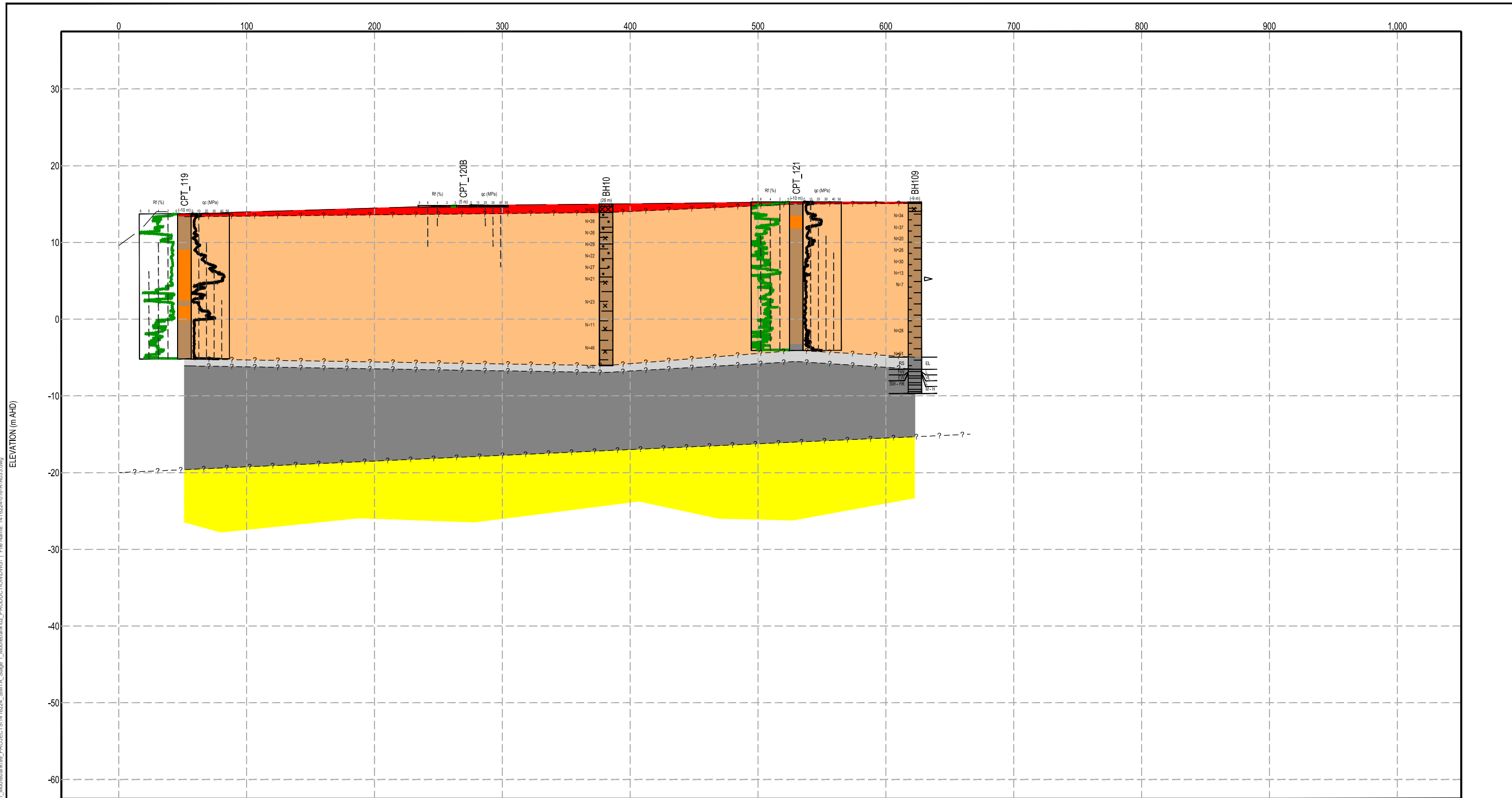
REPORT  
016 - R

Rev.  
2

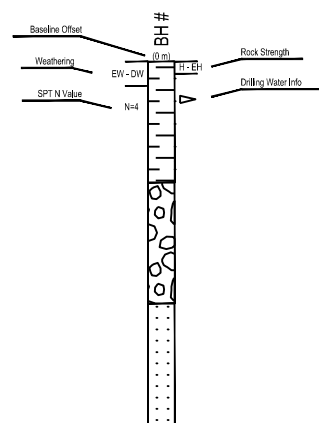
FIGURE  
A032

25 mm IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ISO A3

Path: \\golder\gdp\sydney\geomatics\sydney\intermodal\terminal\alliance\sm\ta\sm\ta\_stage\_1\_moc\bank02\_production\dwg\1 | File Name: 1416224-016-R-A033.dwg



POST LEGEND



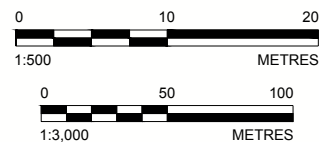
MATERIAL GRAPHIC

- TOPSOIL
- FILL
- Sandy CLAY
- Silty CLAY
- SHALE
- CLAY
- SAND

- UNIT 1 - SURFICIAL SOILS
- UNIT 2 - RECENT ALLUVIUM

- UNIT 3 - OLDER ALLUVIUM
- UNIT 3A - DENSE - VERY DENSE SAND
- UNIT 3B - VERY STIFF - HARD CLAYS

- UNIT 4A - RESIDUAL SHALE SOIL
- UNIT 4B - EXTREMELY LOW TO LOW STRENGTH SHALE
- UNIT 4C - SHALE OF MEDIUM STRENGTH OR HIGHER
- UNIT 5 - MITTAGONG / HAWKESBURY SANDSTONE + ASSOCIATED RESIDUAL SOILS



CLIENT  
SYDNEY INTERMODAL TERMINAL ALLIANCE

CONSULTANT



YYYY-MM-DD 2016-09-02  
 PREPARED EJJ  
 DESIGN JDM  
 REVIEW NRS  
 APPROVED BJF

PROJECT  
MPW  
GEOTECHNICAL SITE INVESTIGATION

TITLE  
INFERRED SUBSURFACE SECTION G - G'

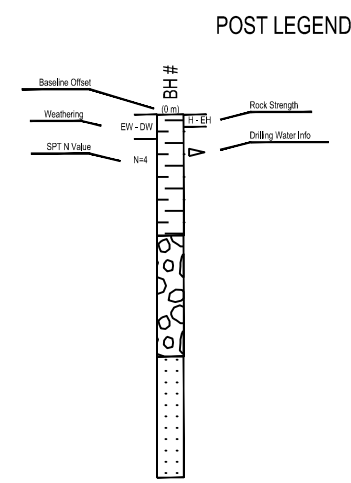
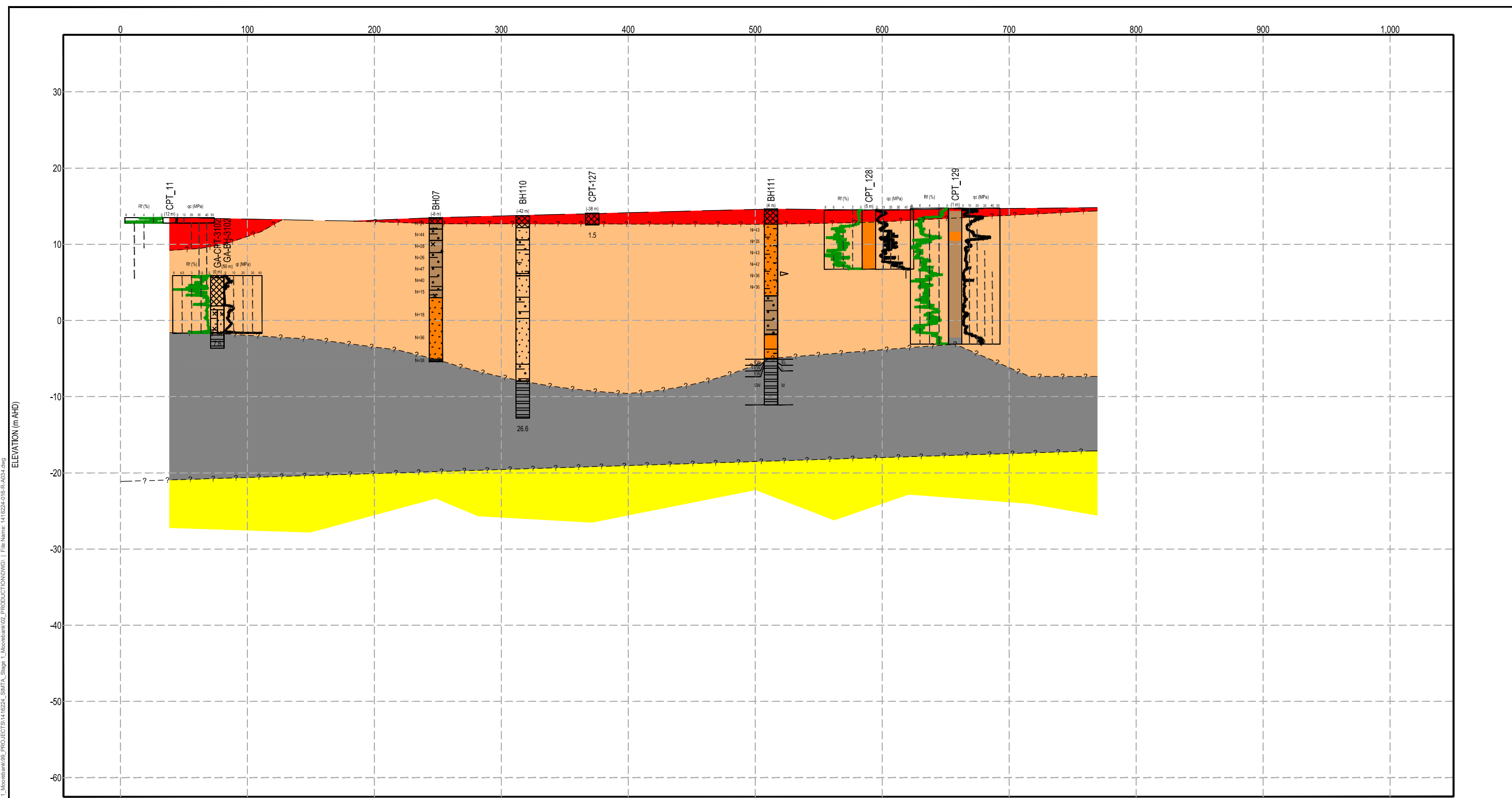
PROJECT No. 1416224  
 REPORT 016 - R

Rev. 2

FIGURE  
A033

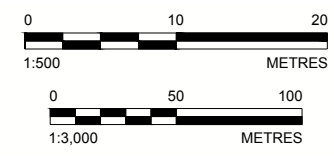
25 mm IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ISO A3

Path: \\golder\gdp\sydney\geomatics\sydney\intermodal\terminal\alliance\sm\ta\sm\ta\_stage\_1\_moc\sm\ta\_stage\_1\_16224\_smta\_stage\_1\_moc\sm\ta\_stage\_1\_16224\_016-r-a034.dwg



MATERIAL GRAPHIC	
	TOPSOIL
	FILL
	Silty CLAY
	Sandy CLAY
	Sandy SILT
	SAND
	Clayey SAND
	CORE LOSS
	SHALE
	CLAY

	UNIT 1 - SURFICIAL SOILS		UNIT 3 - OLDER ALLUVIUM		UNIT 4A - RESIDUAL SHALE SOIL
	UNIT 2 - RECENT ALLUVIUM		UNIT 3A - DENSE - VERY DENSE SAND		UNIT 4B - EXTREMELY LOW TO LOW STRENGTH SHALE
			UNIT 3B - VERY STIFF - HARD CLAYS		UNIT 4C - SHALE OF MEDIUM STRENGTH OR HIGHER
					UNIT 5 - MITTAGONG / HAWKESBURY SANDSTONE + ASSOCIATED RESIDUAL SOILS

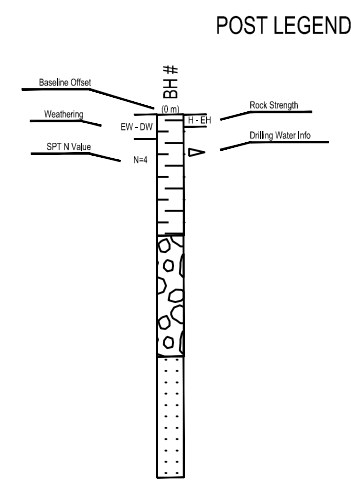
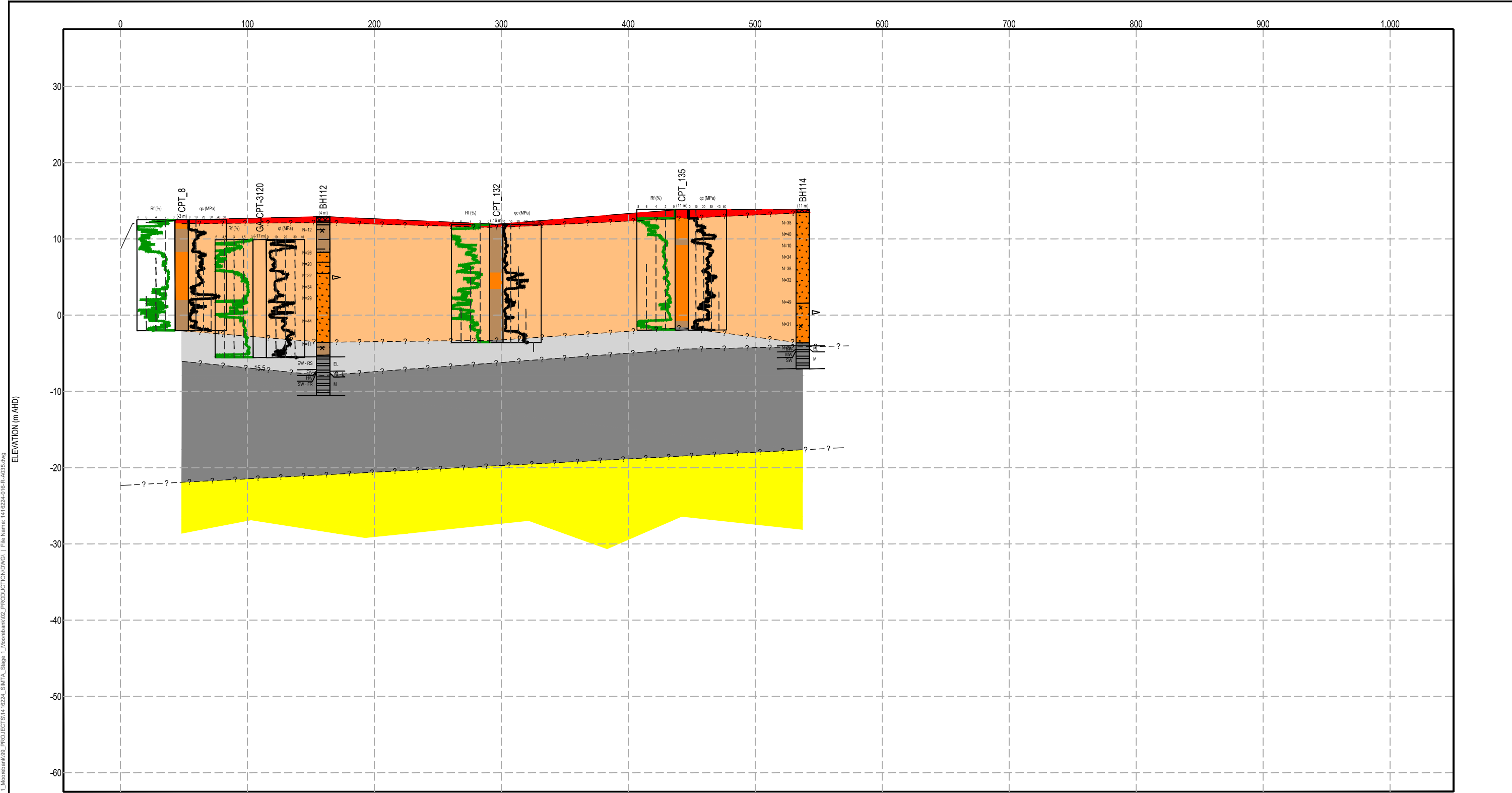


CLIENT	SYDNEY INTERMODAL TERMINAL ALLIANCE	
CONSULTANT	YYYY-MM-DD	2016-09-02
	PREPARED	EJJ
	DESIGN	JDM
	REVIEW	NRS
	APPROVED	BJF

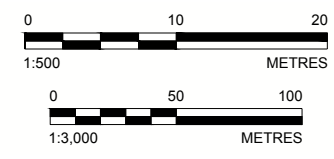
PROJECT	MPW GEOTECHNICAL SITE INVESTIGATION	
TITLE	INFERRED SUBSURFACE SECTION H - H'	
PROJECT No.	REPORT	Rev.
1416224	016 - R	2

25 mm IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ISO A3

Path: \\golder\gdp\sydney\geomatics\sydney\intermodal\terminal\alliance\sm\TA\SM\TA\_Stage\_1\_Mocobank\02\_PRODUCTION\DWG\1\_16224\_016-R-A035.dwg



MATERIAL GRAPHIC		UNIT 1 - SURFICIAL SOILS		UNIT 2 - RECENT ALLUVIUM		UNIT 3 - OLDER ALLUVIUM		UNIT 4A - RESIDUAL SHALE SOIL	
TOPSOIL	SAND	CORE LOSS	Silty SAND						
FILL	Silty CLAY	SHALE	Gravelly SAND						
CLAY	Clayey SAND	ASPHALTIC CONCRETE							



CLIENT SYDNEY INTERMODAL TERMINAL ALLIANCE	PROJECT MPW GEOTECHNICAL SITE INVESTIGATION																
CONSULTANT 	TITLE INFERRED SUBSURFACE SECTION I - I'																
<table border="0"> <tr><td>YYYY-MM-DD</td><td>22016-09-02</td></tr> <tr><td>PREPARED</td><td>EJJ</td></tr> <tr><td>DESIGN</td><td>JDM</td></tr> <tr><td>REVIEW</td><td>NRS</td></tr> <tr><td>APPROVED</td><td>BJF</td></tr> </table>	YYYY-MM-DD	22016-09-02	PREPARED	EJJ	DESIGN	JDM	REVIEW	NRS	APPROVED	BJF	<table border="0"> <tr><td>PROJECT No.</td><td>1416224</td></tr> <tr><td>REPORT</td><td>016 - R</td></tr> <tr><td>Rev.</td><td>2</td></tr> </table>	PROJECT No.	1416224	REPORT	016 - R	Rev.	2
YYYY-MM-DD	22016-09-02																
PREPARED	EJJ																
DESIGN	JDM																
REVIEW	NRS																
APPROVED	BJF																
PROJECT No.	1416224																
REPORT	016 - R																
Rev.	2																
	FIGURE A035																

25 mm IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ISO A3

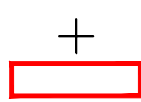




**LEGEND**

TOPSOIL THICKNESS CONTOURS (m)

- 0.05
- 0.1
- 0.15
- 0.20
- 0.25
- 0.30
- 0.35
- 0.40
- 0.45
- 0.50

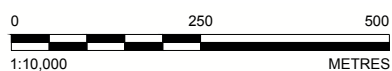
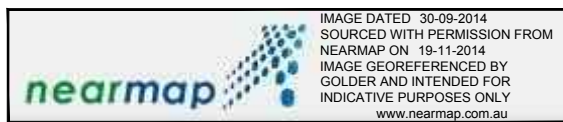


TOPSOIL THICKNESS OBSERVED

APPROXIMATE SITE BOUNDARY

**NOTE(S)**

1. THE APPROXIMATE SITE BOUNDARY REPRESENTS THE SPATIAL EXTENT OF THE GOLDER GEOTECHNICAL AND GEOCHEMICAL PROJECT.



CLIENT

THE TACTICAL GROUP

PROJECT

MPW GEOTECHNICAL SITE INVESTIGATION

TITLE

**GEOTECHNICAL INTERPRETIVE REPORT: TOPSOIL THICKNESS CONTOURS (UNIT 1A)**

CONSULTANT



YYYY-MM-DD 2016-09-02

DESIGNED -

PREPARED NRS / EJJ

REVIEWED JDM

APPROVED JDM

PROJECT NO.  
1416224

REPORT  
016

REV.  
2

FIGURE  
A036



**LEGEND**

- Anthropogenic Fill (confirmed)
- Approximate Site Boundary
- Anthropogenic Fill (potential)

**NOTES**

1. The Approximate Site Boundary represents the spatial extent of the Golder Post Phase 2 ESA project.

**REFERENCE**

1. Aerial Photography Copyright NearMap Pty Ltd.



REFERENCE SCALE: 1:15,000 (at A4)  
PROJECTION: GDA 1994 MGA Zone 56

CLIENT  
**THE TACTICAL GROUP**

PROJECT  
**MPW GEOTECHNICAL SITE INVESTIGATION**

TITLE  
**GEOTECHNICAL INTERPRETIVE REPORT:  
ANTHROPOGENIC FILL MATERIALS**

CONSULTANT	YYYY-MM-DD	2016-09-02
	PREPARED	KJS
	DESIGN	-
	REVIEW	NRS
	APPROVED	NRS



PROJECT 1416224      DOCUMENT 016      Rev. 2

FIGURE  
**A037**

Path: J:\geo\20141416224\_SIMTA\_Stage\_1\_Moorebank\Technical Docs\ES\Project\016\_Rev\11416224\_016\_Rev\_1\_F037.mxd

26mm IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM A4



**LEGEND**

Fill Thickness Contour (m)  Approximate Site Boundary

- 0.4
- 0.8
- 1.2
- 1.6
- 2

**NOTES**

1. The Approximate Site Boundary represents the spatial extent of the Golder Geotechnical and Geochemical project.

**REFERENCE**

1. Aerial Image sourced from Nearmap.



REFERENCE SCALE: 1:15,000 (at A4)  
PROJECTION: GDA 1994 MGA Zone 56

CLIENT  
THE TACTICAL GROUP

PROJECT  
MPW GEOTECHNICAL SITE INVESTIGATION

TITLE  
**GEOTECHNICAL INTERPRETIVE REPORT: FILL THICKNESS CONTOURS (UNIT 1C)**

CONSULTANT	YYYY-MM-DD	2016-09-02
	PREPARED	KJS
	DESIGN	-
	REVIEW	NRS
	APPROVED	NRS



PROJECT  
1416224

DOCUMENT  
016

Rev.  
2

FIGURE  
**A038**

Path: J:\geo\20141416224\_SIMTA\_Stage 1\_Moorebank\Technical Docs\GIS\Project\016\_Rev\11416224\_016\_Rev\_1\_F038.mxd

26mm IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM A4



**LEGEND**

- Top of Rock (mAHD)** — 15
- 10
  - 5
  - 0
  - 5
  - 10

**NOTES**

1. The Approximate Site Boundary represents the spatial extent of the Golder Geotechnical and Geochemical project.

**REFERENCE**

1. Aerial Image sourced from Nearmap.



REFERENCE SCALE: 1:15,000 (at A4)  
PROJECTION: GDA 1994 MGA Zone 56

CLIENT  
**THE TACTICAL GROUP**

PROJECT  
**MPW GEOTECHNICAL SITE INVESTIGATION**

TITLE  
**GEOTECHNICAL INTERPRETIVE REPORT: TOP OF ROCK  
CONTOURS (TOP OF UNITS 4B AND 5B)**

CONSULTANT	YYYY-MM-DD	2016-09-02
	PREPARED	KJS
	DESIGN	-
	REVIEW	NRS
	APPROVED	NRS



PROJECT 1416224 DOCUMENT 016 Rev. 2 **FIGURE A039**

Path: J:\geo\2014\1416224\_SIMTA\_Stage\_1\_Moorebank\Technical Docs\GIS\Project\016\_Rev\11416224\_016\_Rev\_1\_F039.mxd

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM A4

26mm



**LEGEND**

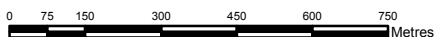
- Acid Sulfate Soil Risk**
- High Risk Sediments
  - Low Risk above 4m
  - No Risk
- Approximate Site Boundary

**NOTES**

1. The Approximate Site Boundary represents the spatial extent of the Golder Geotechnical and Geochemical project.
2. Acid Sulfate Soils Risk data sourced from the Office of Environment and Heritage (OEH).

**REFERENCE**

1. Aerial Photography Copyright NearMap Pty Ltd.
2. Acid Sulfate Soils Risk Data copyright NSW Department of Premier and Cabinet, Office of Environment and Heritage (OEH).



REFERENCE SCALE: 1:15,000 (at A4)  
PROJECTION: GDA 1994 MGA Zone 56

CLIENT  
**THE TACTICAL GROUP**

PROJECT  
**MPW GEOTECHNICAL SITE INVESTIGATION**

TITLE  
**GEOTECHNICAL INTERPRETIVE REPORT: ACID SULPHATE SOIL MAP**

CONSULTANT	YYYY-MM-DD	2016-09-02
	PREPARED	KJS
	DESIGN	-
	REVIEW	NRM
	APPROVED	NRM



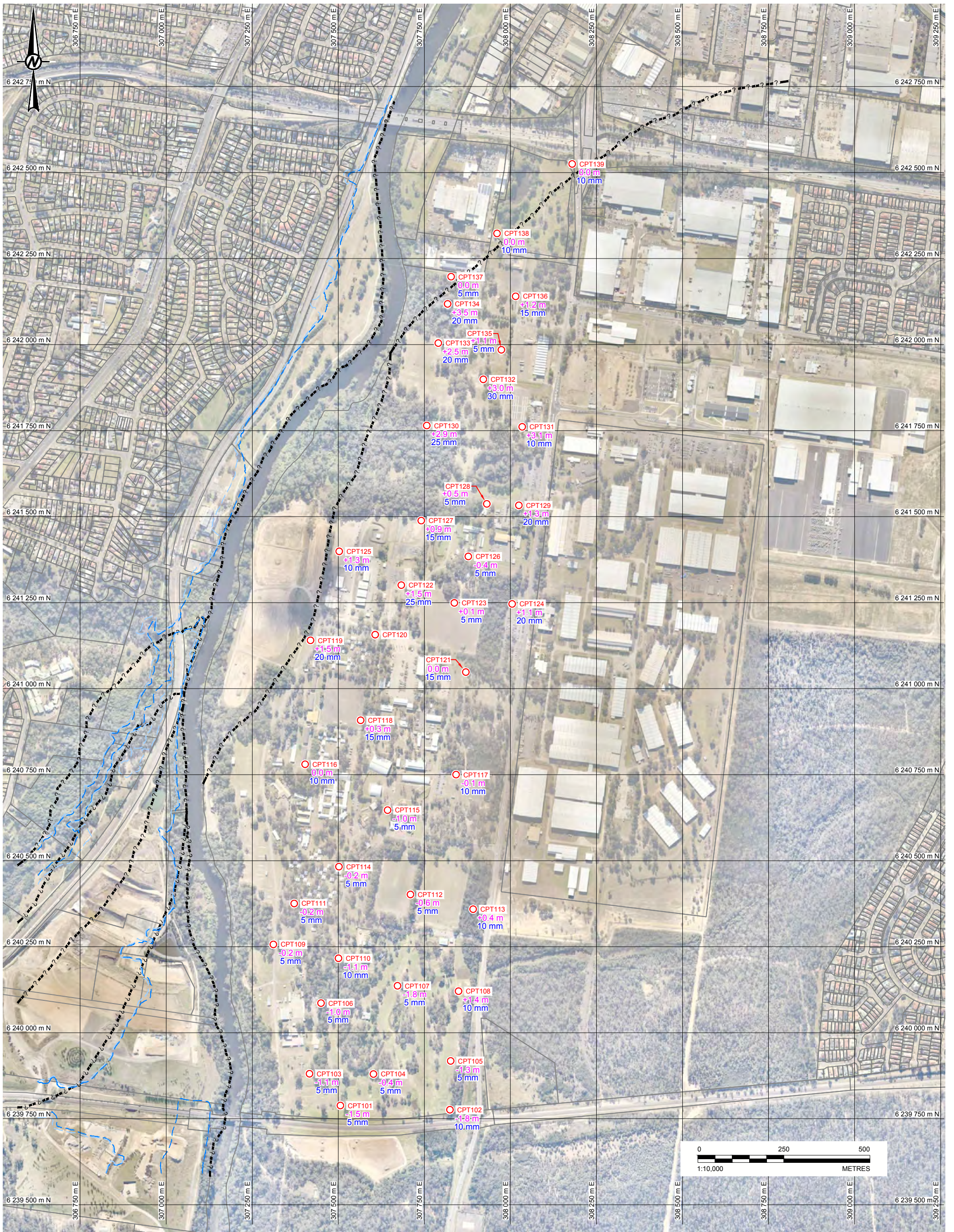
PROJECT 1416224 DOCUMENT 016 Rev. 2

FIGURE **A040**

Path: J:\geo\2014\1416224\_SIMTA\_Stage 1\_Morebank\Technical Docs\GIS\Project\016\_Rev\11416224\_016\_Rev\_1\_F040.mxd

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM A4

26mm



**LEGEND**  
 1.5 m CHANGE IN GROUND LEVEL  
 10 mm ESTIMATED SETTLEMENT

**ASSUMPTIONS**  
 1. SLAB LOADING OF 40 KPa ASSUMED.  
 2. FOOTING LOADS WERE EXCLUDED.  
 3. 1-D SETTLEMENT CALCULATION BASED ON CONSTRAINED MODULUS INFERRED AT CPT LOCATIONS.

CLIENT  
 SYDNEY INTERMODAL TERMINAL ALLIANCE

CONSULTANT



YYYY-MM-DD 2016-02-17  
 PREPARED EJJ  
 DESIGN JDM  
 REVIEW JDM  
 APPROVED JDM

PROJECT  
 MOOREBANK INTERMODAL TERMINAL  
 GEOTECHNICAL AND GEOCHEMICAL SITE INVESTIGATION

TITLE  
**ESTIMATED SETTLEMENTS UNDER 40KPa SLAB LOADING**

PROJECT No.  
 1416224

REPORT  
 016 - R

Rev.  
 0

FIGURE  
 A041

25 mm IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ISO A3

As a global, employee-owned organisation with over 50 years of experience, Golder Associates is driven by our purpose to engineer earth's development while preserving earth's integrity. We deliver solutions that help our clients achieve their sustainable development goals by providing a wide range of independent consulting, design and construction services in our specialist areas of earth, environment and energy.

For more information, visit [golder.com](http://golder.com)

Africa	+ 27 11 254 4800
Asia	+ 86 21 6258 5522
Australasia	+ 61 3 8862 3500
Europe	+ 44 1628 851851
North America	+ 1 800 275 3281
South America	+ 56 2 2616 2000

[solutions@golder.com](mailto:solutions@golder.com)  
[www.golder.com](http://www.golder.com)

**Golder Associates Pty Ltd**  
**124 Pacific Highway**  
**St. Leonards, New South Wales 2065**  
**Australia**  
**T: +61 2 9478 3900**

